

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	2	("4124619").PN.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/09/22 11:11
L2	0	("MCM").PN.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2006/09/22 11:11
L3	13733	MCM	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/09/22 13:27
L4	150415	rhodium or rh	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/09/22 11:11
L5	88	I3 same I4	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/09/22 11:38
L6	11	I3 near10 I4	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/09/22 11:32
L7	526	Bassam	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/09/22 11:32
L8	12	I3 and I7	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/09/22 11:33
L9	11018	hydroform\$	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/09/22 11:36
L10	3	I5 and I9	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/09/22 11:37
L11	9237	heteropolyacid or polyacid	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/09/22 11:38

EAST Search History

L12	964	I3 and I4	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/09/22 14:09
L13	24	I11 and I12	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/09/22 11:40
L14	3	I9 and I13	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/09/22 11:40
L15	1139	"MCM-41"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/09/22 13:27
L16	284	I4 and I15	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/09/22 13:27
L17	3	I4 near I15	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/09/22 13:28
L18	2546087	inner	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/09/22 13:28
L19	40	I16 and I18	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/09/22 13:46
L20	1	I11 and I19	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/09/22 13:29
L21	1	"Rhodium triphenyl phosphite"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/09/22 13:47
L22	3	"Rhodium triphenylphosphite"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/09/22 14:08
L23	368	560/232.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/09/22 14:08

EAST Search History

L24	1	I12 and I23	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2006/09/22 14:09
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NEWS	4	MAY 10	CA/CAPLUS enhanced with 1900-1906 U.S. patent records
NEWS	5	MAY 11	KOREAPAT updates resume
NEWS	6	MAY 19	Derwent World Patents Index to be reloaded and enhanced
NEWS	7	MAY 30	IPC 8 Rolled-up Core codes added to CA/CAPLUS and USPATFULL/USPAT2
NEWS	8	MAY 30	The F-Term thesaurus is now available in CA/CAPLUS
NEWS	9	JUN 02	The first reclassification of IPC codes now complete in INPADOC
NEWS	10	JUN 26	TULSA/TULSA2 reloaded and enhanced with new search and and display fields
NEWS	11	JUN 28	Price changes in full-text patent databases EPFULL and PCTFULL
NEWS	12	JUL 11	CHEMSAFE reloaded and enhanced
NEWS	13	JUL 14	FSTA enhanced with Japanese patents
NEWS	14	JUL 19	Coverage of Research Disclosure reinstated in DWPI
NEWS	15	AUG 09	INSPEC enhanced with 1898-1968 archive
NEWS	16	AUG 28	ADISCTI Reloaded and Enhanced
NEWS	17	AUG 30	CA(SM)/CAPLUS(SM) Austrian patent law changes
NEWS	18	SEP 11	CA/CAPLUS enhanced with more pre-1907 records
NEWS	19	SEP 21	CA/CAPLUS fields enhanced with simultaneous left and right truncation
NEWS EXPRESS		JUNE 30	CURRENT WINDOWS VERSION IS V8.01b, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 26 JUNE 2006.
NEWS HOURS			STN Operating Hours Plus Help Desk Availability
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FILE 'HOME' ENTERED AT 10:53:19 ON 22 SEP 2006

=> ile regf

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=> file reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'REGISTRY' ENTERED AT 10:53:34 ON 22 SEP 2006

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STRUCTURE FILE UPDATES: 21 SEP 2006 HIGHEST RN 908228-18-2

DICTIONARY FILE UPDATES: 21 SEP 2006 HIGHEST RN 908228-18-2

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TSCA INFORMATION NOW CURRENT THROUGH June 30, 2006

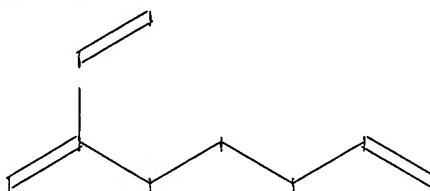
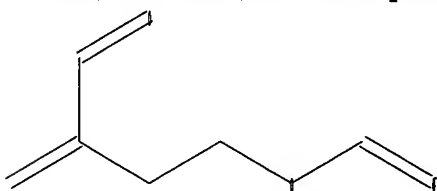
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<http://www.cas.org/ONLINE/UG/regprops.html>

=>

Uploading C:\Documents and Settings\PZucker\My Documents\Examination Auxillary files\10813696\10813696 product structure.str



chain nodes :

1 2 3 4 5 6 7 8 9

chain bonds :

1-2 2-3 2-6 3-4 4-5 5-7 6-9 7-8

exact/norm bonds :

4-5 5-7 6-9 7-8

exact bonds :

1-2 2-3 2-6 3-4

Hydrogen count :

1:>= minimum 2 3:>= minimum 2 4:>= minimum 2 6:>= minimum 1

Match level :

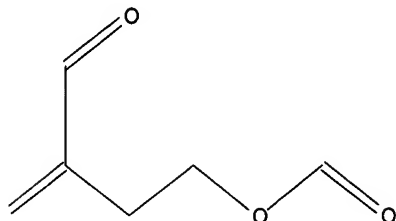
1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS

L1 STRUCTURE UPLOADED

=> d l1

L1 HAS NO ANSWERS

L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> search l1 sss sam

SAMPLE SEARCH INITIATED 10:53:59 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 1836 TO ITERATE

100.0% PROCESSED 1836 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

PROJECTED ITERATIONS: 34150 TO 39290

PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> search l1 sss full

FULL SEARCH INITIATED 10:55:08 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 37952 TO ITERATE

100.0% PROCESSED 37952 ITERATIONS

3 ANSWERS

SEARCH TIME: 00.00.01

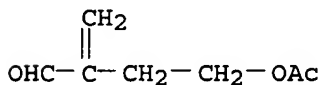
L3 3 SEA SSS FUL L1

=> d scan

L3 3 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN

IN Butanal, 4-(acetyloxy)-2-methylene- (9CI)

MF C7 H10 O3



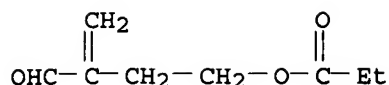
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):3

L3 3 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN

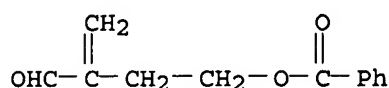
IN Butyraldehyde, 4-hydroxy-2-methylene-, propionate (8CI)

MF C8 H12 O3



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L3 3 ANSWERS REGISTRY COPYRIGHT 2006 ACS on STN
 IN Butanal, 4-(benzoyloxy)-2-methylene- (9CI)
 MF C12 H12 O3



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED

=> file caplus
 COST IN U.S. DOLLARS
 FULL ESTIMATED COST

SINCE FILE	TOTAL
ENTRY	SESSION
172.66	172.87

FILE 'CAPLUS' ENTERED AT 11:01:58 ON 22 SEP 2006
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=> l3

L4 11 L3

=> l3/prep

11 L3
 3530376 PREP/RL

L5 10 L3/PREP
(L3 (L) PREP/RL)

=> d 15 1-10 ti fbib abs

L5 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
TI Catalytic hydroformylation and deacetoxylation process for the preparation
of esters of hydroxy tiglic aldehydes from 2-butene-1,4-diol diesters
AN 2005:1050946 CAPLUS
DN 143:349036
TI Catalytic hydroformylation and deacetoxylation process for the preparation
of esters of hydroxy tiglic aldehydes from 2-butene-1,4-diol diesters
IN Chaudhari, Raghunath Vitthal; Chansarkar, Rashmi; Mukhopadhyay, Kausik;
Kelkar, Ashutosh Anant
PA India
SO U.S. Pat. Appl. Publ., 10 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

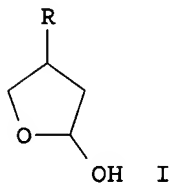
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	US 2005215814	A1	20050929	US 2004-813696	20040329
				US 2004-813696	20040329

OS CASREACT 143:349036; MARPAT 143:349036
AB Esters of hydroxy tiglic aldehydes (e.g., 2-formyl-4-acetoxy-1-butene) are
prepared by the hydroformylation of biscalboxylic esters of
but-2-ene-1,4-diol (e.g., 1,4-diacetoxy-2-butene), followed by
deacetoxylation of its hydroformylation compound, in the presence of
heterogeneous catalyst having a rhodium complex entrapped, anchored or
tethered on the acidic support, where the acidic support causes
deacetoxylation in the reaction mixture immediately after hydroformylation,
to give 100% selectivity to the carboxylic esters of hydroxyl tiglic
aldehydes in a single step.

L5 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
TI Hydroformylation with rhodium phosphine-modified catalyst in a
microemulsion: comparison of organic and aqueous systems for styrene,
cyclohexene and 1,4-diacetoxy-2-butene
AN 2005:529787 CAPLUS
DN 143:211450
TI Hydroformylation with rhodium phosphine-modified catalyst in a
microemulsion: comparison of organic and aqueous systems for styrene,
cyclohexene and 1,4-diacetoxy-2-butene
AU Uenveren, Hesna Huelya Yildiz; Schomaecker, Reinhard
CS Institut fuer Chemie, Technische Universitaet Berlin, Berlin, 10623,
Germany
SO Catalysis Letters (2005), 102(1-2), 83-89
CODEN: CALEER; ISSN: 1011-372X
PB Springer
DT Journal
LA English
OS CASREACT 143:211450
AB Use of microemulsion as a reaction medium in the hydroformylation of
styrene, cyclohexene, and 1,2-diacetoxy-2-butene was studied using
alkylpolyglycol ether-type nonionic surfactant in the presence of
phosphine-modified rhodium catalyst. The expts. were performed under
comparable homogeneous and biphasic conditions in order to make direct
comparison of microemulsion with classical systems. Thus, the expts. were
also carried out using catalysts such as unmodified rhodium carbonyl H
Rh(CO)4 and H Rh(CO)(PPh3)3 in homogeneous system, Rh-TPPTS complex in
two-phase system and in association with co-solvent.
RE.CNT 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
 TI Preparation of 4-acyloxy-2-formyl-1-butene
 AN 1999:748642 CAPLUS
 DN 131:336745
 TI Preparation of 4-acyloxy-2-formyl-1-butene
 IN Kajiyashiki, Tsuyoshi; Kido, Yoichi; Ohnishi, Takashi
 PA Kuraray Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11322670	A2	19991124	JP 1998-152254 JP 1998-152254	19980515 19980515
OS	CASREACT 131:336745; MARPAT 131:336745				
GI					



AB $\text{H}_2\text{C}:\text{C}(\text{CHO})\text{CHRCH}_2\text{O}_2\text{CR}_1$ [R = H, Me; R₁ = H, (un)substituted aliphatic hydrocarbyl, (un)substituted aromatic hydrocarbyl] are prepared by reaction of furans I (R = H, Me) with HCHO in the presence of carboxylic acids or primary or secondary amines and acylation of $\text{H}_2\text{C}:\text{C}(\text{CHO})\text{CHRCH}_2\text{OH}$ (R = H, Me). 2-Hydroxytetrahydrofuran was reacted with HCHO in the presence of HNBu₂ and butyric acid in 2-PrOH at 80° for 2 h to give 77.2% 2-formyl-4-hydroxy-1-butene, which was reacted with Ac₂O in the presence of 4-dimethylaminopyridine in CH₂Cl₂ at 20° for 3 h to give 91.5% 4-acetoxy-2-formyl-1-butene.

L5 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
 TI Preparation of 2-formyl-4-acyloxy-1-butenes as materials for vitamin A
 AN 1995:375143 CAPLUS
 DN 122:186955
 TI Preparation of 2-formyl-4-acyloxy-1-butenes as materials for vitamin A
 IN Nagareda, Katsushi
 PA Kuraray Co, Japan
 SO Jpn. Kokai Tokkyo Koho, 4 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06336456	A2	19941206	JP 1993-127555	19930528
	JP 3228485	B2	20011112		
				JP 1993-127555	19930528

OS CASREACT 122:186955; MARPAT 122:186955
 AB $\text{OCHC}:\text{CH}_2\text{CH}_2\text{CH}_2\text{OCOR}$ (III; R = lower alkyl) are prepared by treating $\text{CH}_2:\text{CHCH}_2\text{OCOR}$ (I) with H and CO in the presence of Rh catalysts, then treating the $\text{OCH}:\text{CH}_2\text{CH}_2\text{CH}_2\text{OCOR}$ (II) obtained with HCHO in the presence of secondary amine salts. Autoclaving a mixture of I (R = Ac), RhH(CO)(PPh₃)₃, PPh₃, and 1,4-diphenylphosphinobutane at 120° and 10 atm H-CO for 3 h gave II (R = Ac) (IV) in 67% selectivity at 98% conversion. A mixture of IV, aqueous HCHO, and dimethylamine acetate was treated at 160° for 30

s to give I (R = Ac) in 96% selectivity at 98% conversion.

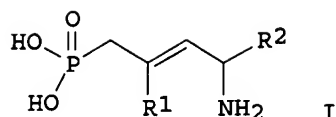
L5 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
TI Preparation of 2-amino-4-phosphonomethyl-3-alkenoic acids and derivatives
as anticonvulsants and NMDA antagonists
AN 1995:4884 CAPLUS
DN 122:10255
TI Preparation of 2-amino-4-phosphonomethyl-3-alkenoic acids and derivatives
as anticonvulsants and NMDA antagonists
IN Angst, Christof; Allgeier, Hans; Heckendorn, Roland; Wallach, Daniel
PA Ciba-Geigy Corp., USA
SO U.S., 23 pp. Cont.-in-part of U.S. Ser. No. 586,352, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	US 5294734	A	19940315	US 1992-851437	19920316
				CH 1989-3479	A 19890926
				US 1990-586352	B2 19900921
	US 5488140	A	19960130	US 1995-483628	19950607
				CH 1989-3479	A 19890926
				US 1990-586352	B2 19900921
				US 1992-851437	A2 19920316
				US 1993-169687	B1 19931217

PATENT FAMILY INFORMATION:

FAN	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	EP 420806	A1	19910403	EP 1990-810712	19900918
	EP 420806	B1	19950705		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
				CH 1989-3479	A 19890926
	ES 2074153	T3	19950901	ES 1990-810712	19900918
				CH 1989-3479	A 19890926
	IL 95729	A1	19980222	IL 1990-95729	19900918
				CH 1989-3479	A 19890926
	CA 2026038	AA	19910327	CA 1990-2026038	19900924
				CH 1989-3479	A 19890926
	FI 97231	B	19960731	FI 1990-4690	19900924
	FI 97231	C	19961111		
				CH 1989-3479	A 19890926
	NO 9004169	A	19910327	NO 1990-4169	19900925
	NO 179450	B	19960701		
	NO 179450	C	19961009		
				CH 1989-3479	A 19890926
	AU 9063152	A1	19910411	AU 1990-63152	19900925
	AU 638057	B2	19930617		
				CH 1989-3479	A 19890926
	ZA 9007641	A	19910529	ZA 1990-7641	19900925
				CH 1989-3479	A 19890926
	JP 03130296	A2	19910604	JP 1990-252073	19900925
				CH 1989-3479	A 19890926
	HU 56110	A2	19910729	HU 1990-6210	19900925
				CH 1989-3479	A 19890926
	DD 298105	A5	19920206	DD 1990-344183	19900925
				CH 1989-3479	A 19890926

OS MARPAT 122:10255
GI



AB Title compds. I [R1 = lower alkanoyloxy-lower alkyl or benzyloxy-lower alkyl, lower alkoxy-lower alkyl or phenyl-lower alkoxy-lower alkyl, 6-aminoethyl, (mono- or di)lower alkyl-6-aminoethyl; R2 = carboxy, lower alkoxy-carbonyl, 4-7 membered cycloalkoxy-carbonyl or phenyl-lower alkoxy-carbonyl, where any Ph in R1 or R2 is optionally substituted with lower alkyl, lower alkoxy, halo, -CN, and/or CF3], and their salts are prepared as anticonvulsants and NMDA antagonists (no data). Thus, Et 6-acetoxy-4-diisopropylphosphonomethyl-2-formylamino-3-hexenoate (preparation given) was reacted with Me3SiBr in CH2Cl2 for 22 h, then EtOH was added. After 22 h, the mixture was concentrated on a rotary evaporator, the residue dissolved in EtOH, and the solution was treated with propylene oxide. The suspension formed was filtered to afford I (R1 = HOCH2CH2, R2 = CO2Et). Pharmaceutical formulations of I are disclosed (4 examples). Compds. I and their formulations are useful in the treatment of epilepsy, ischemia, or migraines.

L5 ANSWER 6 OF '10 CAPLUS COPYRIGHT 2006 ACS on STN
 TI Preparation of phosphonyl substituted 2-aminoalk-3-enoic acid derivatives as pharmaceutical agents
 AN 1991:429632 CAPLUS
 DN 115:29632
 TI Preparation of phosphonyl substituted 2-aminoalk-3-enoic acid derivatives as pharmaceutical agents
 IN Angst, Christof; Allgeier, Hans; Heckendorn, Roland; Wallach, Daniel
 PA Ciba-Geigy A.-G., Switz.
 SO Eur. Pat. Appl., 31 pp.
 CODEN: EPXXDW
 DT Patent
 LA German
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	EP 420806	A1	19910403	EP 1990-810712	19900918
	EP 420806	B1	19950705		
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				CH 1989-3479	A 19890926
	ES 2074153	T3	19950901	ES 1990-810712	19900918
				CH 1989-3479	A 19890926
	IL 95729	A1	19980222	IL 1990-95729	19900918
				CH 1989-3479	A 19890926
	CA 2026038	AA	19910327	CA 1990-2026038	19900924
				CH 1989-3479	A 19890926
	FI 97231	B	19960731	FI 1990-4690	19900924
	FI 97231	C	19961111		
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	NO 9004169	A	19910327	NO 1990-4169	19900925
	NO 179450	B	19960701		
	NO 179450	C	19961009		
				CH 1989-3479	A 19890926
	AU 9063152	A1	19910411	AU 1990-63152	19900925
	AU 638057	B2	19930617		
				CH 1989-3479	A 19890926
	ZA 9007641	A	19910529	ZA 1990-7641	19900925
				CH 1989-3479	A 19890926
	JP 03130296	A2	19910604	JP 1990-252073	19900925
				CH 1989-3479	A 19890926
	HU 56110	A2	19910729	HU 1990-6210	19900925

DD 298105	A5	19920206	CH 1989-3479	A	19890926
			DD 1990-344183		19900925
			CH 1989-3479	A	19890926

PATENT FAMILY INFORMATION:

FAN 1995:4884

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5294734	A	19940315	US 1992-851437	19920316
				CH 1989-3479	A 19890926
				US 1990-586352	B2 19900921
	US 5488140	A	19960130	US 1995-483628	19950607
				CH 1989-3479	A 19890926
				US 1990-586352	B2 19900921
				US 1992-851437	A2 19920316
				US 1993-169687	B1 19931217

OS CASREACT 115:29632; MARPAT 115:29632

AB Preparation of amino(phosphonomethyl)alkenoates{ (HO)2P(O)CH2CR1:CHC(NH2)R2}, as pharmaceutically important compds., starting from α,β -unsatd. aldehyde (CH2:CR3CHO) and α -isocyanic acid esters (R4N+.tplbond.C-) in 5 steps is claimed. Cycloaddn. reaction of α,β -unsatd. aldehyde with α -isocyanic acid esters in the presence of copper(I) oxide or bis(cyclohexyl isocyanide)gold(I) tetrafluoroborate as catalyst gave oxazolinecarbonylates which on hydrolysis gave hydroxyformylaminoalkenoates. Bromination, phosphorylation with trialkyl phosphites, followed by reaction with Me3SiBr gave desired compds. Thus, reaction of 6-(N-benzyloxycarbonylamino)-2-methylenehexanal with isocyanuric acid Me ester in PhMe in the presence of Cu(I)O as catalyst gave Me 5-[6-(N-benzyloxycarbonylamino)hex-1-en-2-yl]-oxazoline-4-carboxylate (I). Hydrolysis of I in the presence of Et3N/H2O gave Me 8-(N-benzyloxycarbonylamino)-2-formylamino-3-hydroxy-4-methyleneoctanoate (II). Bromination of II with thionyl bromide, phosphorylation with (EtO)3P, followed by treatment with 6N HCl gave 2,8-diamino-4-phosphonomethyloct-3-enoic acid.

L5 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN

TI Process for preparing α,β -unsaturated aldehydes

AN 1988:94816 CAPLUS

DN 108:94816

TI Process for preparing α,β -unsaturated aldehydes

IN Otera, Junzo; Suzuki, Shigeaki; Onishi, Takashi; Fujita, Yoshiji

PA Kuraray Co., Ltd., Japan

SO Eur. Pat. Appl., 34 pp.

CODEN: EPXXDW

DT Patent

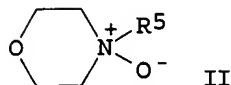
LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 234496	A2	19870902	EP 1987-102298	19870218
	EP 234496	A3	19891129		
	EP 234496	B1	19920902		
	EP 234496	B2	19970723		
	R: AT, BE, CH, DE, FR, GB, IT, LI, NL, SE				
				JP 1986-45104	A 19860228
				JP 1986-145069	A 19860620
	JP 62201845	A2	19870905	JP 1986-45104	19860228
	JP 03002138	B4	19910114		
	JP 63002941	A2	19880107	JP 1986-145069	19860620
	JP 05079052	B4	19931101		
	US 4745229	A	19880517	US 1987-15095	19870213
				JP 1986-45104	A 19860228
				JP 1986-145069	A 19860620
	AT 80142	E	19920915	AT 1987-102298	19870218
				JP 1986-45104	A 19860228
				JP 1986-145069	A 19860620

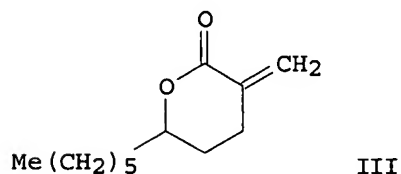
DK 8700995	A	19870829	EP 1987-102298	A	19870218
			DK 1987-995		19870226
			JP 1986-45104	A	19860228
			JP 1986-145069	A	19860620

OS CASREACT 108:94816; MARPAT 108:94816
GI



AB A process for preparing $R_1R_2C:CR_3CHO$ [I; R_1, R_2, R_3 independently = H, alkyl or alkenyl (un)substituted with acyloxy] comprises: i) reaction of $R_1R_2C:CR_3CH_2Cl$ with R_4NO (R_4 = C2-4 alkyl) and morpholine oxides II (R_5 = C1-4 alkyl, or ii) reaction of $R_1R_2CClCR_3:CH_2$ with R_4NO and II in the presence of an alkali metal iodide or Cu halide. I are useful as intermediates for vitamin A or as fragrance chems. A mixture of geranyl chloride, II (R_5 = Et), and DMF was agitated at room temperature 1 h and at 50° 4 h to give 88% citral.

L5 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
TI Oxidation of 2-substituted allylsilane to conjugated enal using hypervalent organoiodine compound and synthesis of α -methylene γ - and δ -lactones
AN 1983:405142 CAPLUS
DN 99:5142
TI Oxidation of 2-substituted allylsilane to conjugated enal using hypervalent organoiodine compound and synthesis of α -methylene γ - and δ -lactones
AU Ochiai, Masahito; Fujita, Eiichi; Arimoto, Masao; Yamaguchi, Hideo
CS Inst. Chem. Res., Kyoto Univ., Kyoto, 611, Japan
SO Tetrahedron Letters (1983), 24(8), 777-80
CODEN: TELEAY; ISSN: 0040-4039
DT Journal
LA English
OS CASREACT 99:5142
GI



AB Oxidation of allylsilanes with PhIO and $BF_3 \cdot Et_2O$ in dioxane gave enals in high yield. Reaction of $AcO(CH_2)_2CR:CH_2$ (I; R = CH_2SiMe_3) with PhIO and $BF_3 \cdot Et_2O$ in dioxane at room temperature for 12 h gave 63% I (R = CHO). The reaction involves transient intermediate $RC(:CH_2)CH_2IPhOSiMe_3 \cdot BF_3$ (R = alkyl). These enals were readily converted into the corresponding γ - and δ -lactones. Oxidation of $Me(CH_2)_5CH(OAc)(CH_2)_2C(:CH_2)R$ (II; R = CHO) with $NaClO_2$ in the presence of $Me_2C:CHMe$ gave 83% II (R = CO_2H) which on hydrolysis with NaOH in aqueous MeOH and treatment with dicyclohexylcarbodiimide in pyridine gave 72% lactone III.

L5 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
TI Formyl compound
AN 1977:105966 CAPLUS
DN 86:105966

TI Formyl compound
 IN Fitton, Peter; Moffet, Harold
 PA Hoffmann-La Roche, F., und Co., A.-G., Switz.
 SO Ger. Offen., 16 pp.
 CODEN: GWXXBX
 DT Patent
 LA German
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2621224	A1	19761216	DE 1976-2621224	19760513
				US 1975-581458	A 19750528
	BE 842232	A1	19761126	BE 1976-167337	19760526
				US 1975-581458	A 19750528
	NL 7605688	A	19761130	NL 1976-5688	19760526
				US 1975-581458	A 19750528
	JP 51146413	A2	19761216	JP 1976-60220	19760526
				US 1975-581458	A 19750528
	FR 2312486	A1	19761224	FR 1976-15939	19760526
	FR 2312486	B1	19790727		
				US 1975-581458	A 19750528
	GB 1481507	A	19770803	GB 1976-22076	19760527
				US 1975-581458	A 19750528
	US 4124619	A	19781107	US 1977-780553	19770323
				US 1975-581458	A1 19750528

OS MARPAT 86:105966
 AB Hydroformylation of $\text{AcOCH}_2\text{CH:CHCH}_2\text{OAc}$ over $\text{HRh(CO)(Ph}_3\text{P)}_3$ pretreated with NaBH_4 , Rh-C-P(OPh)_3 , or $\text{Rh(cyclohexadiene)(MeCOCH}_2\text{COMe)}$ gave $\text{AcOCH}_2\text{CH(CHO)CH}_2\text{CH}_2\text{OAc}$ (I). Pyrolysis of I catalyzed by 4-MeC₆H₄SO₃H gave $\text{CH}_2\text{:C(CHO)CH}_2\text{CH}_2\text{OAc}$ which rearranged over $\text{Pd-C-Me}_2\text{NCSNMe}_2$ to $\text{MeC(CHO):CHCH}_2\text{OAc}$, useful in preparation of vitamin A.

L5 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN

TI 3-Formyl-3-butenyl carboxylates
 AN 1970:530642 CAPLUS
 DN 73:130642
 TI 3-Formyl-3-butenyl carboxylates
 IN Himmele, Walter; Aquila, Werner; Prinz, Richard
 PA Badische Anilin- & Soda-Fabrik AG
 SO Ger. Offen., 6 pp.
 CODEN: GWXXBX
 DT Patent
 LA German
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 1918695	A	19701015	DE 1969-1918695	19690412
	DE 1918695	B2	19740919		
	DE 1918695	C3	19750430		
					A
	US 3661980	A	19720509	US 1970-26440	19700407
				DE 1969-1918695	A 19690412
	BE 748777	A	19701012	BE 1970-748777	19700410
				DE 1969-1918695	A 19690412
	NL 7005205	A	19701014	NL 1970-5205	19700410
				DE 1969-1918695	A 19690412
	FR 2038414	A1	19710108	FR 1970-13035	19700410
				DE 1969-1918695	A 19690412
	GB 1299243	A	19721213	GB 1970-1299243	19700410
				DE 1969-1918695	A 19690412

AB The title compds., $\text{CH}_2\text{:C(CHO)CH}_2\text{CH}_2\text{O}_2\text{CR}$ (I, R = Me, Et) useful as odorants and intermediates in the synthesis of vitamin A, were prepared by reaction of $\text{RCO}_2\text{CH}_2\text{CH:CHCH}_2\text{CO}_2\text{R}$ with 1:1 volume % H-CO mixture in C₆H₆ at 70-100° and 400-800 atm on <0.1% Rh carbonyl complexes, formed from RhCl₃ in the reaction.

=> hydroform?

L6 9369 HYDROFORM?

=> 16 and 15

L7 4 L6 AND L5

=> d 17 1-4 ti fbib abs

L7 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2006 ACS on STN

TI Catalytic hydroformylation and deacetoxylation process for the preparation of esters of hydroxy tiglic aldehydes from 2-butene-1,4-diol diesters

AN 2005:1050946 CAPLUS

DN 143:349036

TI Catalytic hydroformylation and deacetoxylation process for the preparation of esters of hydroxy tiglic aldehydes from 2-butene-1,4-diol diesters

IN Chaudhari, Raghunath Vitthal; Chansarkar, Rashmi; Mukhopadhyay, Kausik; Kelkar, Ashutosh Anant

PA India

SO U.S. Pat. Appl. Publ., 10 pp.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	US 2005215814	A1	20050929	US 2004-813696	20040329
				US 2004-813696	20040329

OS CASREACT 143:349036; MARPAT 143:349036

AB Esters of hydroxy tiglic aldehydes (e.g., 2-formyl-4-acetoxy-1-butene) are prepared by the hydroformylation of biscarboxylic esters of but-2-ene-1,4-diol (e.g., 1,4-diacetoxy-2-butene), followed by deacetoxylation of its hydroformylation compound, in the presence of heterogeneous catalyst having a rhodium complex entrapped, anchored or tethered on the acidic support, where the acidic support causes deacetoxylation in the reaction mixture immediately after hydroformylation, to give 100% selectivity to the carboxylic esters of hydroxyl tiglic aldehydes in a single step.

L7 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2006 ACS on STN

TI Hydroformylation with rhodium phosphine-modified catalyst in a microemulsion: comparison of organic and aqueous systems for styrene, cyclohexene and 1,4-diacetoxy-2-butene

AN 2005:529787 CAPLUS

DN 143:211450

TI Hydroformylation with rhodium phosphine-modified catalyst in a microemulsion: comparison of organic and aqueous systems for styrene, cyclohexene and 1,4-diacetoxy-2-butene

AU Uenveren, Hesna Huelya Yildiz; Schomaecker, Reinhard

CS Institut fuer Chemie, Technische Universitaet Berlin, Berlin, 10623, Germany

SO Catalysis Letters (2005), 102(1-2), 83-89

CODEN: CALEER; ISSN: 1011-372X

PB Springer

DT Journal

LA English

OS CASREACT 143:211450

AB Use of microemulsion as a reaction medium in the hydroformylation of styrene, cyclohexene, and 1,2-diacetoxy-2-butene was studied using alkylpolyglycol ether-type nonionic surfactant in the presence of phosphine-modified rhodium catalyst. The expts. were performed under comparable homogeneous and biphasic conditions in order to make direct

comparison of microemulsion with classical systems. Thus, the expts. were also carried out using catalysts such as unmodified rhodium carbonyl $\text{H Rh}(\text{CO})_4$ and $\text{H Rh}(\text{CO})(\text{PPh}_3)_3$ in homogeneous system, Rh-TPPTS complex in two-phase system and in association with co-solvent.

RE.CNT 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2006 ACS on STN
TI Preparation of 2-formyl-4-acyloxy-1-butenes as materials for vitamin A
AN 1995:375143 CAPLUS
DN 122:186955
TI Preparation of 2-formyl-4-acyloxy-1-butenes as materials for vitamin A
IN Nagareda, Katsushi
PA Kuraray Co, Japan
SO Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06336456	A2	19941206	JP 1993-127555	19930528
	JP 3228485	B2	20011112		
				JP 1993-127555	19930528
OS	CASREACT 122:186955; MARPAT 122:186955				
AB	OCHC:CH ₂ CH ₂ CH ₂ OCOR (III; R = lower alkyl) are prepared by treating CH ₂ :CHCH ₂ OCOR (I) with H and CO in the presence of Rh catalysts, then treating the OCH:CH ₂ CH ₂ CH ₂ OCOR (II) obtained with HCHO in the presence of secondary amine salts. Autoclaving a mixture of I (R = Ac), $\text{RhH}(\text{CO})(\text{PPh}_3)_3$, PPh_3 , and 1,4-diphenylphosphinobutane at 120° and 10 atm H-CO for 3 h gave II (R = Ac) (IV) in 67% selectivity at 98% conversion. A mixture of IV, aqueous HCHO, and dimethylamine acetate was treated at 160° for 30 s to give I (R = Ac) in 96% selectivity at 98% conversion.				

L7 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2006 ACS on STN
TI Formyl compound
AN 1977:105966 CAPLUS
DN 86:105966
TI Formyl compound
IN Fitton, Peter; Moffet, Harold
PA Hoffmann-La Roche, F., und Co., A.-G., Switz.
SO Ger. Offen., 16 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2621224	A1	19761216	DE 1976-2621224	19760513
				US 1975-581458	A 19750528
	BE 842232	A1	19761126	BE 1976-167337	19760526
				US 1975-581458	A 19750528
	NL 7605688	A	19761130	NL 1976-5688	19760526
				US 1975-581458	A 19750528
	JP 51146413	A2	19761216	JP 1976-60220	19760526
				US 1975-581458	A 19750528
	FR 2312486	A1	19761224	FR 1976-15939	19760526
	FR 2312486	B1	19790727		
				US 1975-581458	A 19750528
	GB 1481507	A	19770803	GB 1976-22076	19760527
				US 1975-581458	A 19750528
	US 4124619	A	19781107	US 1977-780553	19770323
				US 1975-581458	A1 19750528
OS	MARPAT 86:105966				
AB	Hydroformylation of $\text{AcOCH}_2\text{CH:CHCH}_2\text{OAc}$ over $\text{HRh}(\text{CO})(\text{Ph}_3\text{P})_3$				

pretreated with NaBH₄, Rh-C-P(OPh)₃, or Rh(cyclohexadiene) (MeCOCH₂COMe) gave AcOCH₂CH(CHO)CH₂CH₂OAc (I). Pyrolysis of I catalyzed by 4-MeC₆H₄SO₃H gave CH₂:C(CHO)CH₂CH₂OAc which rearranged over Pd-C-Me₂NCSNMe₂ to MeC(CHO):CHCH₂OAc, useful in preparation of vitamin A.

=> MGM

317 MGM
17 MGMS
L8 332 MGM
(MGM OR MGMS)

=> MCM

9983 MCM
274 MCMS
L9 10087 MCM
(MCM OR MCMS)

=> rhodium or Rh

69622 RHODIUM
32 RHODIUMS
69624 RHODIUM
(RHODIUM OR RHODIUMS)
92293 RH
481 RHS
92598 RH
(RH OR RHS)
L10 121736 RHODIUM OR RH

=> l9 and l10

L11 167 L9 AND L10

=> l9 (l)l10

L12 107 L9 (L)L10

=> Sil?

L13 2077251 SIL?

=> l12 and l13

L14 51 L12 AND L13

=> ?polyacid

L15 2954 ?POLYACID

=> l14 and l15

L16 0 L14 AND L15

=> HPA

7393 HPA
216 HPAS
L17 7488 HPA
(HPA OR HPAS)

=> l14 and l17

L18 0 L14 AND L17

=> phophomolybdic or phosphotungstic

3 PHOPHOMOLYBDIC
4861 PHOSPHOTUNGSTIC
L19 4864 PHOPHOMOLYBDIC OR PHOSPHOTUNGSTIC

=> l14 and l19

L20 0 L14 AND L19

=> l11 and l15

L21 3 L11 AND L15

=> d l21 1-3 ti

L21 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN
TI Hydroformylation of alkyl alkenes catalyzed by rhodium supported on MCM-41: The effect of H3PW12O40 on the catalytic activity and recycling

L21 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN
TI Rhodium(I) and rhodium(III)-heteropolyacids supported on MCM-41 for the catalytic hydroformylation of styrene derivatives

L21 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN
TI Hydroformylation and acetalization of styrene derivatives catalyzed by Rh(III)-phosphite and Rh(III) supported on MCM-41-phosphite systems

=> d l21 1-3 ti fbib abs

L21 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN
TI Hydroformylation of alkyl alkenes catalyzed by rhodium supported on MCM-41: The effect of H3PW12O40 on the catalytic activity and recycling
AN 2006:398759 CAPLUS
TI Hydroformylation of alkyl alkenes catalyzed by rhodium supported on MCM-41: The effect of H3PW12O40 on the catalytic activity and recycling
AU El Ali, Bassam; Tijani, Jimoh; Fettouhi, Mohammed
CS Chemistry Department, KFUPM, Dhahran, 31261, Saudi Arabia
SO Journal of Molecular Catalysis A: Chemical (2006), 250(1-2), 153-162
CODEN: JMCCF2; ISSN: 1381-1169

PB Elsevier B.V.

DT Journal

LA English

AB Heteropolyacids impregnated with rhodium(I) or (III) complexes were prepared and used as supported catalysts in the hydroformylation of alkyl alkenes. Two general types of catalysts were prepared and tested: rhodium(I) or (III) in the presence and in the absence of the heteropolyacid H3PW12O40, 25H2O (adopted as HPW12) supported on MCM-41 (30 Å). 1-Octene was chosen as a model substrate. Different types of supported catalysts were tested in the hydroformylation of 1-octene and other alkyl alkenes. The effects of the temperature and the type of solvent on the reaction were studied. The results showed that the supported catalysts containing the heteropolyacid H3PW12O40, 25H2O (HPW12) along with rhodium(I) or (III) gave higher catalytic activity. In addition, the recycling of the supported catalysts was studied and the results showed again the important effect of the presence of HPW12 on the recycling of the rhodium catalysts.

RE.CNT 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN
TI Rhodium(I) and rhodium(III)-heteropolyacids supported on MCM-41 for the catalytic hydroformylation of styrene derivatives

AN 2005:224057 CAPLUS

DN 142:465408

TI Rhodium(I) and rhodium(III)-heteropolyacids supported on MCM-41 for the catalytic hydroformylation of styrene derivatives

AU El Ali, B.; Tijani, J.; Fettouhi, M.; El-Faer, M.; Al-Arfaj, A.

CS Chemistry Department, King Fahd University of Petroleum and Minerals

(KFUPM), Dhahran, 31261, Saudi Arabia
 SO Applied Catalysis, A: General (2005), 283(1-2), 185-196
 CODEN: ACAGE4; ISSN: 0926-860X
 PB Elsevier B.V.
 DT Journal
 LA English
 OS CASREACT 142:465408
 AB Rh supported catalysts were prepared by impregnating rhodium(I) and rhodium(III) complexes with and without heteropoly acids for the hydroformylation of styrene derivs. The effect of the pore size of MCM-41 was considered. The addition of water showed a promoting effect with Rh(III) based catalysts. The amount of water showed also a big effect on the catalytic activity of the Rh(III) supported catalyst. The change of the temperature affects the selectivity of the reaction time of the reaction. Different heteropolyacids such as H3PMo12O40·xH2O (HPA-Mo12) and H3PW12O40·yH2O (HPA-W12) were used as co-catalysts that were impregnated along with rhodium complexes on the inorg. supports. The results showed a clear effect of the heteropolyacid H3PW12O40·yH2O (HPA-W12) in increasing the catalytic activity of the rhodium supported catalyst.
 RE.CNT 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN
 TI Hydroformylation and acetalization of styrene derivatives catalyzed by Rh(III)-phosphite and Rh(III) supported on MCM -41-phosphite systems
 AN 2002:776187 CAPLUS
 TI Hydroformylation and acetalization of styrene derivatives catalyzed by Rh(III)-phosphite and Rh(III) supported on MCM -41-phosphite systems
 AU El Ali, Bassam
 CS Chemistry Department, King Fahd University of Petroleum and Minerals, Dhahran 31261, Saudi Arabia
 SO Abstracts of Papers, 224th ACS National Meeting, Boston, MA, United States, August 18-22, 2002 (2002), ORGN-841 Publisher: American Chemical Society, Washington, D. C.
 CODEN: 69CZPZ
 DT Conference; Meeting Abstract
 LA English
 AB Aldehydes and acetals are produced by hydroformylation and acetalization reactions. Rhodium complexes in homogeneous systems are among the most active catalysts of hydroformylation in terms of yields and selectivity. Also, rhodium catalysts immobilized on inorg. supports have been also widely explored. Acetalization is the reaction of the direct formation of acetals from alkenes under the hydroformylation conditions but in the presence of alcs. Simple rhodium (III) complexes, such as RhCl3, 3H2O, were not widely explored in the acetalization of alkenes due to their very low catalytic activity in the hydroformylation reaction. In this paper we would like to report an efficient catalyst system including rhodium (III) and a heteropolyacid immobilized on MCM-41 for the hydroformylation of styrene. The "one-pot" conversion of styrene into acetals by rhodium (III)-triphenylphosphite catalyst system will be also reported.

=> logoff hold
 COST IN U.S. DOLLARS
 FULL ESTIMATED COST

SINCE FILE	TOTAL
ENTRY	SESSION
105.56	278.43

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION

CA SUBSCRIBER PRICE -12.75 -12.75

SESSION WILL BE HELD FOR 60 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 11:31:45 ON 22 SEP 2006

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSSPTA1623PAZ

PASSWORD:

* * * * * RECONNECTED TO STN INTERNATIONAL * * * * *
SESSION RESUMED IN FILE 'CAPLUS' AT 11:56:25 ON 22 SEP 2006
FILE 'CAPLUS' ENTERED AT 11:56:25 ON 22 SEP 2006
COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	105.56	278.43
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-12.75	-12.75

=> D HIS

(FILE 'HOME' ENTERED AT 10:53:19 ON 22 SEP 2006)

FILE 'REGISTRY' ENTERED AT 10:53:34 ON 22 SEP 2006

L1 STRUCTURE UPLOADED
L2 0 SEARCH L1 SSS SAM
L3 3 SEARCH L1 SSS FULL

FILE 'CAPLUS' ENTERED AT 11:01:58 ON 22 SEP 2006

L4 11 L3
L5 10 L3/PREP
L6 9369 HYDROFORM?
L7 4 L6 AND L5
L8 332 MGM
L9 10087 MCM
L10 121736 RHODIUM OR RH
L11 167 L9 AND L10
L12 107 L9 (L)L10
L13 2077251 SIL?
L14 51 L12 AND L13
L15 2954 ?POLYACID
L16 0 L14 AND L15
L17 7488 HPA
L18 0 L14 AND L17
L19 4864 PHOPHOMOLYBDIC OR PHOSPHOTUNGSTIC
L20 0 L14 AND L19
L21 3 L11 AND L15

=> L11 AND L15

L22 3 L11 AND L15

=> D L22 1-3 TI

L22 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN
TI Hydroformylation of alkyl alkenes catalyzed by rhodium supported on MCM-41: The effect of H3PW12O40 on the catalytic activity and

recycling

L22 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN
TI Rhodium(I) and rhodium(III)-heteropolyacids supported
on MCM-41 for the catalytic hydroformylation of styrene
derivatives

L22 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2006 ACS on STN
TI Hydroformylation and acetalization of styrene derivatives catalyzed by
Rh(III)-phosphite and Rh(III) supported on MCM
-41-phosphite systems

=> LOGOFF HOLD

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

107.93

280.80

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

-12.75

-12.75

SESSION WILL BE HELD FOR 60 MINUTES

STN INTERNATIONAL SESSION SUSPENDED AT 11:57:56 ON 22 SEP 2006